



REMARKS

Information Disclosure Statement

The Information Disclosure Statement includes the additional reference listed in Bellaar at column 1, line 65.

Drawings

A substitute set of drawings is enclosed which are of a better quality than the drawings that were originally filed.

35 U.S.C. § 103 Rejections

The Examiner has rejected claims 1-21 under 35 U.S.C. § 103(a) as being unpatentable over Smith 1 (U.S. 2002/0041036) in view of Pao, further in view of Bellaar. This includes independent apparatus claims 1 and 18. Applicant submits that independent claims 1 and 18, as amended, and their dependencies, are patentable over the cited references.

There is no suggestion in any of the references that standoff members on an electronic device can be used to prevent a component from coming into contact with a part when attachment layers on the standoff members are being soldered to contact terminals on the board.

Smith 1 discloses the use of chip contacts 26, each having a core 40 and a

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fusible conductive material 42 surrounding the core 40. See paragraphs 0023 and 0024. The purpose of the cores 40 is to provide compliance to the assembly 20. See paragraph 0033. There is no suggestion that the cores 40 can be used to limit movement in a z-direction. There is specifically no suggestion that the cores 40 can limit movement in a z-direction to prevent other components from contacting one another.

Claims 1 and 18 now include the additional limitations of a component mounted to the electronic device and prevented from contacting the board by the standoff members because the standoff members resist movement of the electronic device toward the board when the attachment layers are mounted. This limitation is not suggested by Smith 1.

Pao discloses the use of solder paste 12 that encapsulates a solder ball 18. Solder melts. There is no suggestion that the solder ball 18 can be used to limit vertical movement of the component 24 toward the board 14. There is specifically no suggestion that the solder ball 18 can prevent contact between a component mounted to the component 24 from contacting the board 14. Pao thus adds nothing to Smith 1 in this regard.

Bellaar, in Figure 1, for example, illustrates the use of spherical solid cores 13 that are surrounded with solder material 14. The solder material 14 appears to be a convenient manner for attaching the solid cores 13 to the interposer 7. Again, there is no suggestion that the solid cores 13 can be used to limit vertical movement and thereby prevent any component on the interposer 7 from coming

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into contact with a board to which the device of Figure 1 is mounted. Bellaar thus also fails to add anything to Smith 1 in this regard.

Applicant therefore submits that claims 1 and 18 are patentable over Smith 1, Pao, and Bellaar because claims 1 and 18 include at least one limitation that is not disclosed or suggested by the references. Claim 2 has been deleted.

Applicant, accordingly, respectfully requests withdrawal of the rejections of claims 1 and 3-21 under 35 U.S.C. § 103(a) as being unpatentable over Smith 1 in view of Pao, further in view of Bellaar.

The Examiner has also rejected claims 22-24 under 35 U.S.C. § 103(a) as being unpatentable over Smith 1 in view of Pao, further in view of Bellaar, and further in view of Smith 2 (6,303,408). Claims 23 and 24 have been deleted and their limitations have been added to claim 22. In addition, claim 22 has been amended with the limitations added to claim 1. As hereinbefore discussed, claim 1, and therefore also claim 22, includes at least one limitation not disclosed or suggested by Smith 1, Pao, or Bellaar. Smith 2 appears to be the same as Smith 1, and thus adds nothing more to Smith 1, Pao, and Bellaar. Specifically, Smith 2 does not disclose the use of standoff components to prevent a component mounted to an electronic device from coming into contact with a board having contact terminals to which attachment layers on the standoff components are soldered.

Applicant therefore submits that claim 22, as amended, includes at least one limitation not suggested by Smith 1, Pao, Bellaar, or Smith 2. Applicant, accordingly, respectfully requests withdrawal of the rejections of claim 22 under 35 U.S.C. § 103(a) as being unpatentable over Smith 1 in view of Pao, further in view of Bellaar, and further in view of Smith 2.

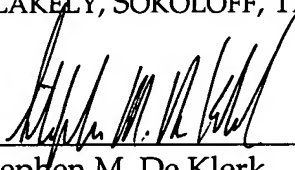
Applicant respectfully submits that the present application is in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call Stephen M. De Klerk at (408) 720-8300.

Please charge any shortages and credit any overages to Deposit Account No. 02-2666. Any necessary extension of time for response not already requested is hereby requested. Please charge any corresponding fee to Deposit Account No. 02-2666.

Respectfully submitted,

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Application No.: 10/068,494

Examiner: Fazli Erdem
Art Unit: 2826

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